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Filed : July 24, 2003

## REMARKS

By this paper, Applicant has amended Claim 1 and cancelled Claims 9-13 and 21. Claims 9-13 were previously withdrawn from the Application. Applicant reserves the right to pursue the subject matter of Claims 9-13 and 21 in one or more subsequent continuation applications. Claims 1-8 and 14-20 are currently pending in this application. In view of the remarks below, Applicant asserts that the pending claims are each in condition for allowance.

### Discussion of Claim Rejections Under 35 U.S.C. §102

On page 2 of the Office Action, the Examiner rejects Claims 14-17 as being anticipated by Faris (U.S. Patent Application No. 2002/0171080). More particularly, the Examiner states that Figures 1-32 of Faris disclose the claimed method for manufacturing a thin-film device.

The present application states that the claimed invention “differs from methods in the prior art by the fact that a device is fabricated on the thin film while placed on a support to which the thin film is not physically bonded and/or glued. In other words, the device is fabricated on a free-standing thin film.” Paragraph 16 of Specification. Similarly, Claim 14 recites a “method of manufacturing a thin film device comprising: fabricating a device on a free-standing thin film; and depositing the thin film device on a substrate.” Emphasis added.

Applicant respectfully submits that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. See M.P.E.P. § 2131. As described in further detail below, there is no teaching or suggestion in Faris of “fabricating a device on a free-standing thin film,” as recited in Claim 14.

The Abstract of Faris states that “[a] layered structure generally includes a first layer suitable for having a useful element formed therein or thereon selectively attached or bonded to a second layer.” Emphasis added. In the Summary of the Invention, Faris teaches that “[a] method to form a multiple layered substrate generally comprises selectively adhering a first substrate to a second substrate.” Emphasis added, Faris, Paragraph [0026]. Faris then defines the bonds that may be used in “selectively adhering” the first and second substrate. More particularly, in paragraph [0033] of Faris, we read that “both layer 1 and 2 are treated to define regions of weak bonding 5 and strong bonding 6, and [layers 1 and 2 are] subsequently bonded, wherein the regions of weak bonding 5 are in a condition to allow processing of a useful device or structure.”

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Emphasis added. Accordingly, Faris teaches that a first layer is selectively attached or bonded to a second layer through the use of weak and strong bonding portions.

The Examiner states that paragraph [0043] of Faris teaches that weak bond regions approach zero and paragraph [0049] teaches an embodiment in which layers 1 and 2 do not bond at the weak bond regions. Even if the Examiner's interpretation of Faris is accurate, however, the Office Action still fails to cite a teaching or suggestion in Faris that there are also no strong bonds between the layers. Faris, in fact, teaches that "[t]he key feature of any treatment employed, however, is the ability to form one or more region of weak bonding and one or more regions of strong bonding, providing SB/WB bond strength ratio greater than 1." Faris, Paragraph [0059]. Accordingly, even if there is no bond at the weak bond regions of layer 1, Faris fails to teach that there is also no bond at the strong bond regions of Layer 1. Thus, even in the embodiment relied upon by the Office Action, Faris teaches that layers 1 and 2 are bonded. In view of the above discussion of Faris, Applicant respectfully submits that because Faris does not teach or suggest each and every element of Claim 14, this Claim is not anticipated and is in condition for allowance.

Claims 15-17 depend from Claim 14. Accordingly, Applicant asserts that Claims 15-17 are patentable for at least the reasons discussed above with respect to Claim 14, as well as for their own patentable features. Reconsideration of Claims 14-17 is respectfully requested.

#### Discussion of claim rejections under 35 U.S.C. §103

On page 3 of the Office Action, the Examiner rejects Claims 1-8, and 14-20 under 35 U.S.C. §103(a) as being unpatentable over Background of the Invention in view of Faris. In view of the claim amendments above and the remarks below, Applicant respectfully requests reconsideration of these claims.

To establish a *prima facie* case of obviousness a three-prong test must be met. First, there must be some suggestion or motivation, either in the references or in the knowledge generally available among those of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success found in the prior art. Third, the prior art reference must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

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Accordingly, in order to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *See* M.P.E.P § 2143.03.

On page 4 of the Office Action, the Examiner notes that "Background of the invention fails to teach the use of a dummy support for fabricating the active device before transferring the device to a foreign substrate." Applicant notes that the Background of the Invention does not state that any prior art references teach other elements of the claimed subject matter, including "transferring the thin film to a dummy support, the thin film not being attached to the dummy support," as recited in Claim 1. As discussed above with respect to Claims 14-17, and described below with respect to all pending claims, the combination of Faris with any teachings regarding the prior art located in the Background of the Invention still fails to teach at least this element of Claim 1.

The Examiner takes the position that Faris "teaches substantially the claimed method for forming a solar cell." Applicant submits, however, that Faris does not support this position. Applicant notes that the prior art must suggest the desirability of the claimed invention and the fact that references can be modified is not sufficient to establish prima facie obviousness. *See* M.P.E.P. § 2143.01. Furthermore, the fact that the claimed invention is within the capability of one of ordinary skill in the art is not sufficient by itself to establish prima facie obviousness. *Id.*

Claim 1 recites, in pertinent part:

A method of manufacturing a semiconductor device ... comprising:

- (a) forming a porous semiconductor layer in the form of a thin film on an original substrate, the forming being immediately followed by
- (b) separating the thin film by a lift-off process from the original substrate; [and]
- (c) transferring the thin film to a dummy support, the thin film not being attached to the dummy support.

As recited in Claim 1, "the thin film [is] not being attached to the dummy support." In contrast, Faris teaches that "[t]he key feature of any treatment employed, however, is the ability to form one or more region of weak bonding and one or more regions of strong bonding, providing SB/WB bond strength ratio greater than 1." Faris, Paragraph [0059]. Accordingly, Applicant respectfully asserts that Faris fails to teach or suggest at least that "the thin film [is] not being attached to the dummy support," as recited in Claim 1.

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Claims 2-8 depend from Claim 1 and, accordingly, are patentable for at least the reasons discussed above with respect to their Claim 1, as well as for their own patentable features. Reconsideration of Claims 1-8 is respectfully requested.

Claim 14 recites a "method of manufacturing a thin film device comprising: fabricating a device on a free-standing thin film; and depositing the thin film device on a substrate." As discussed above with respect to the rejection of Claim 14 under 35 U.S.C. 102, Faris does not teach or suggest at least "transferring the thin film to a dummy support, the thin film not being attached to the dummy support," as recited in Claim 14. Accordingly, Applicant respectfully asserts that Claim 14 is in condition for allowance.

Claims 15-17 depend from Claim 14 and, accordingly, are patentable for at least the reasons discussed above with respect to Claim 14, as well as for their own patentable features. Reconsideration of Claims 14-17 is respectfully requested.

Claim 18 recites a "method of manufacturing a thin film device comprising ... forming a thin film on an original substrate; separating the thin film from the original substrate; [and] transferring the thin film to a dummy support so that the thin film is free-standing." As discussed above with respect to the rejections of Claims 1 and 14, Faris does not teach or suggest "transferring the thin film to a dummy support so that the thin film is free-standing." Accordingly, Applicant respectfully asserts that Claim 18 is in condition for allowance.

Claims 19-20 depend from Claim 19 and, accordingly, are patentable for at least the reasons discussed above with respect to their respective base claims, as well as for their own patentable features. Reconsideration of Claims 18-20 is respectfully requested.

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Summary

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested. If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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